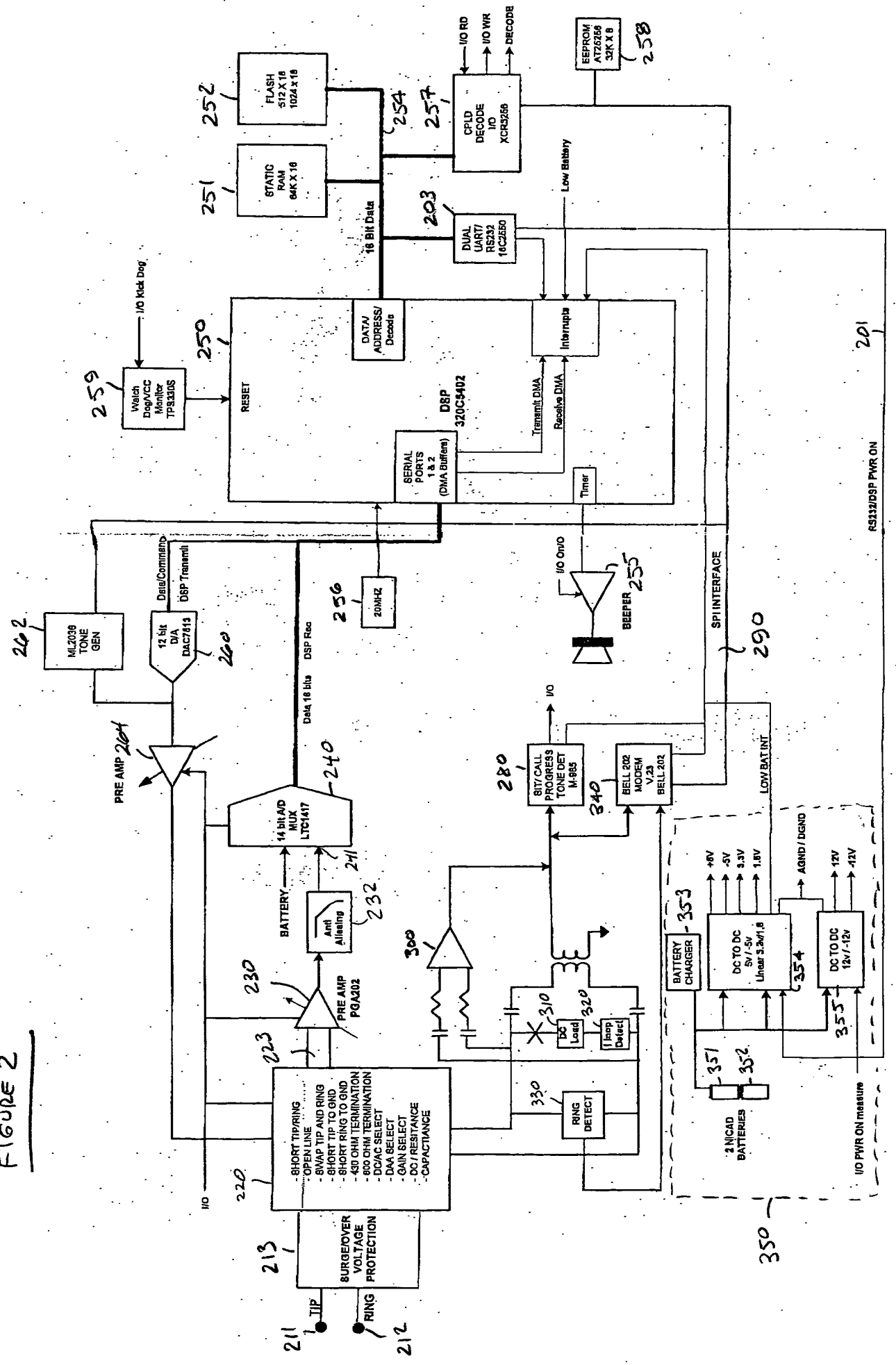


FIGURE 1

FIGURE 2



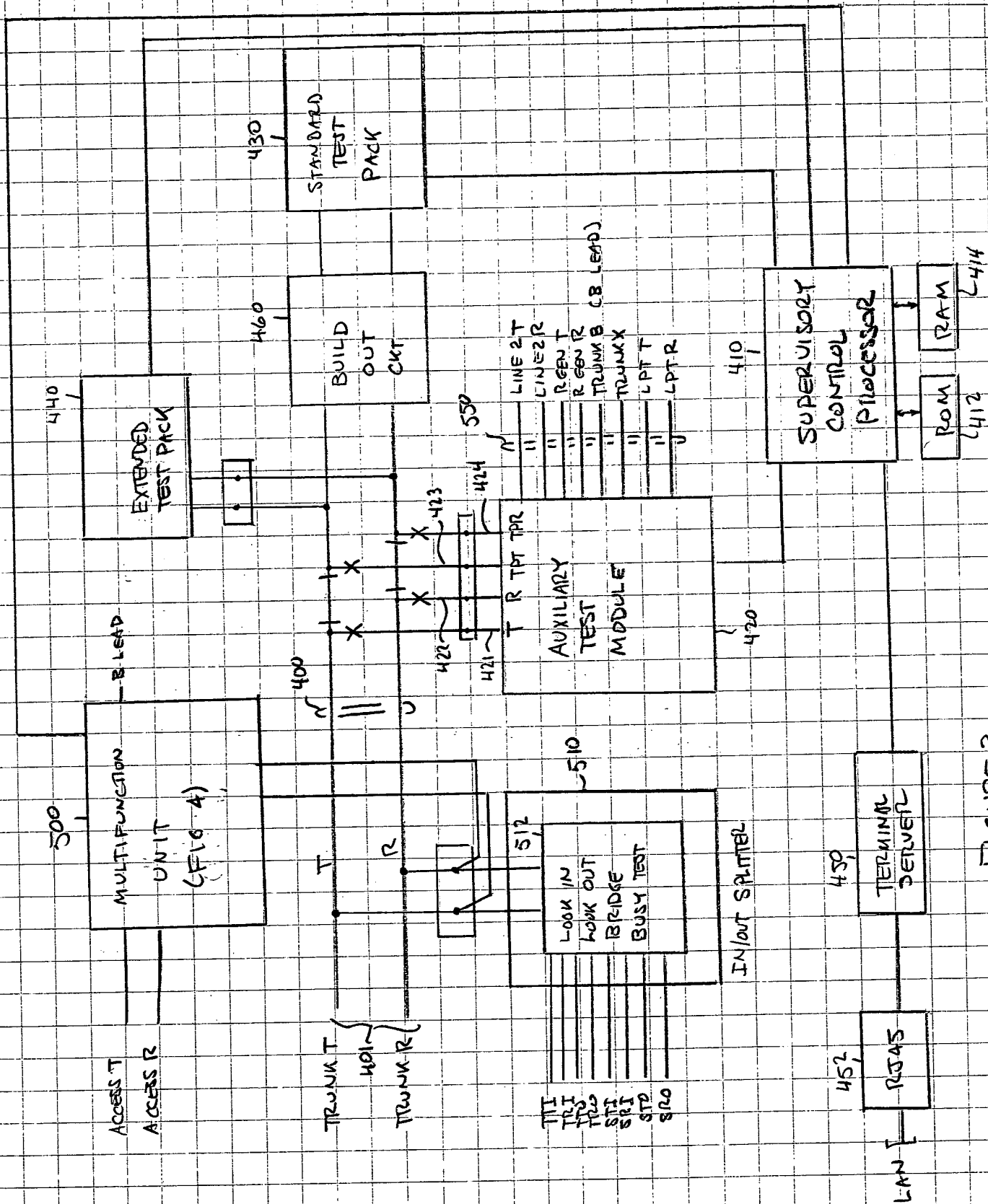


Figure 3

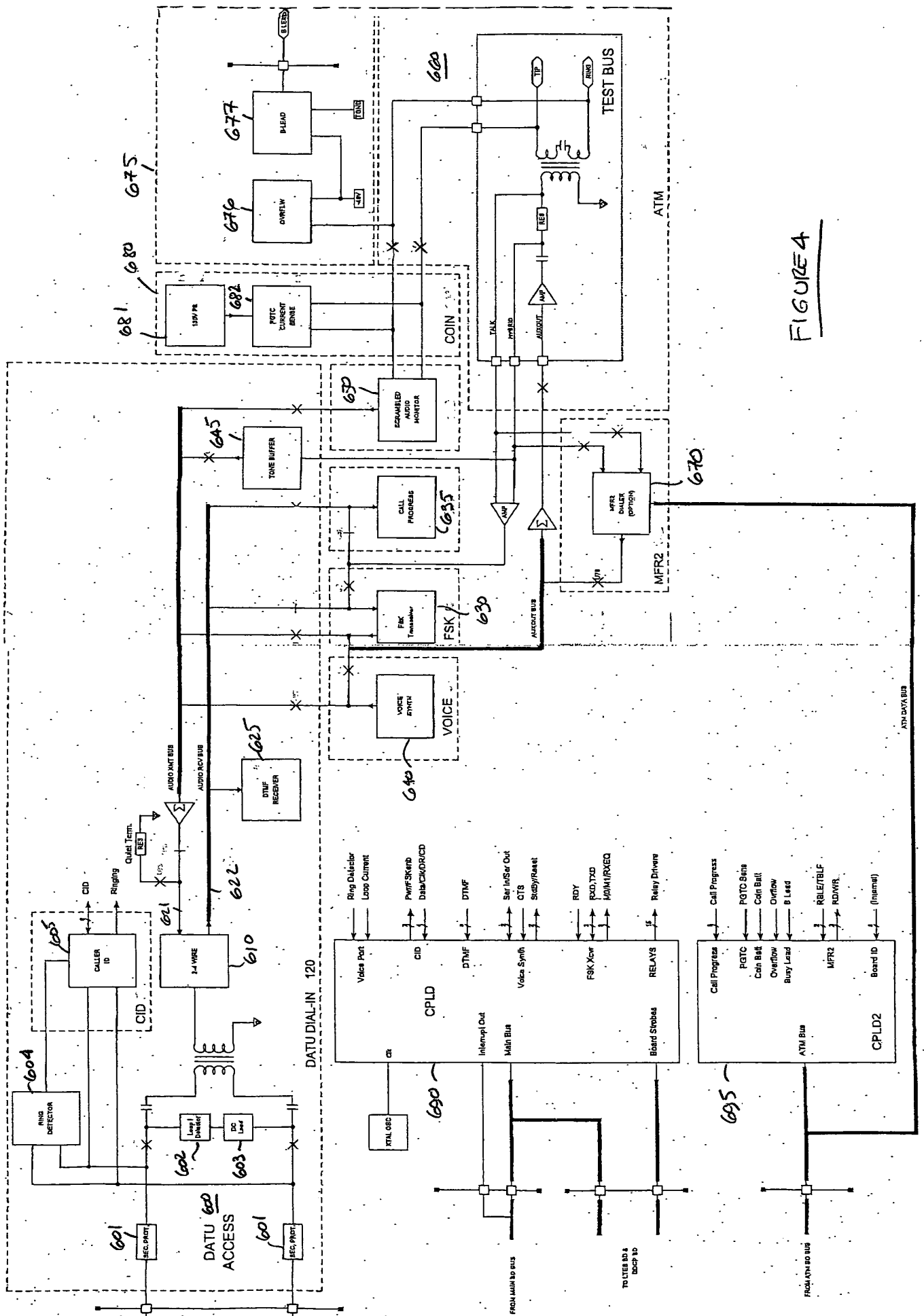


FIGURE 4

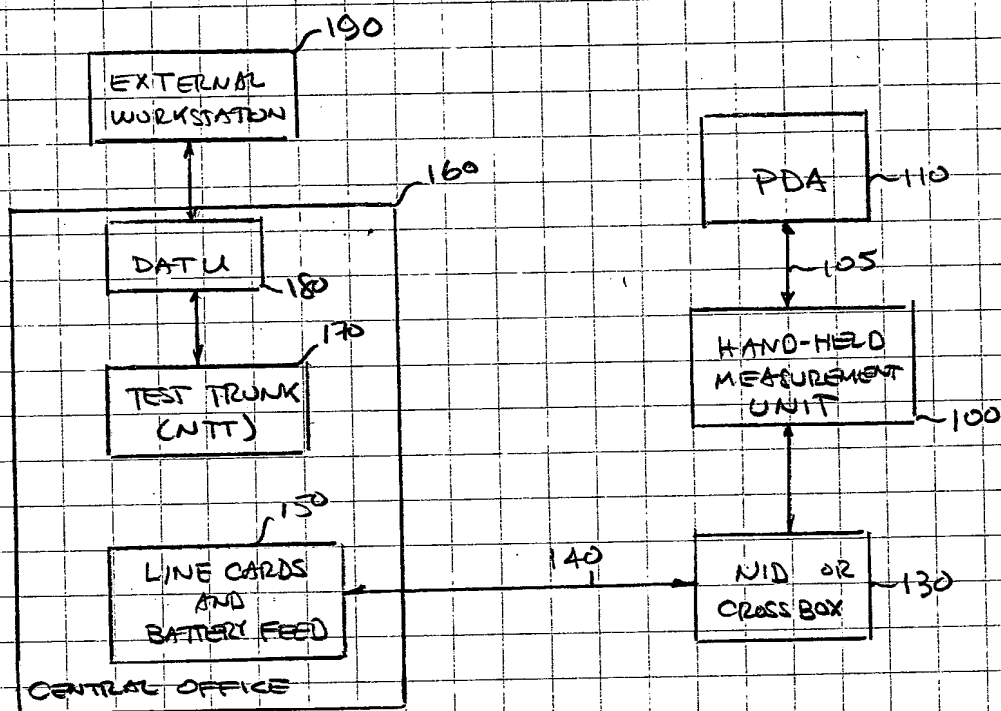


FIGURE 5

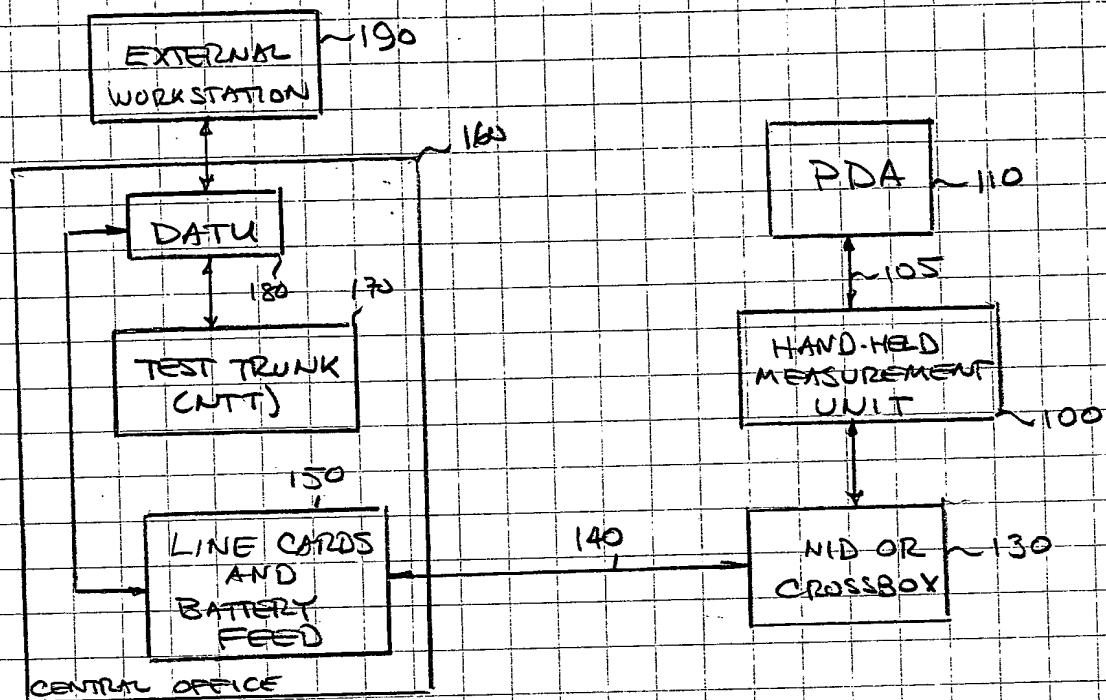


FIGURE 6

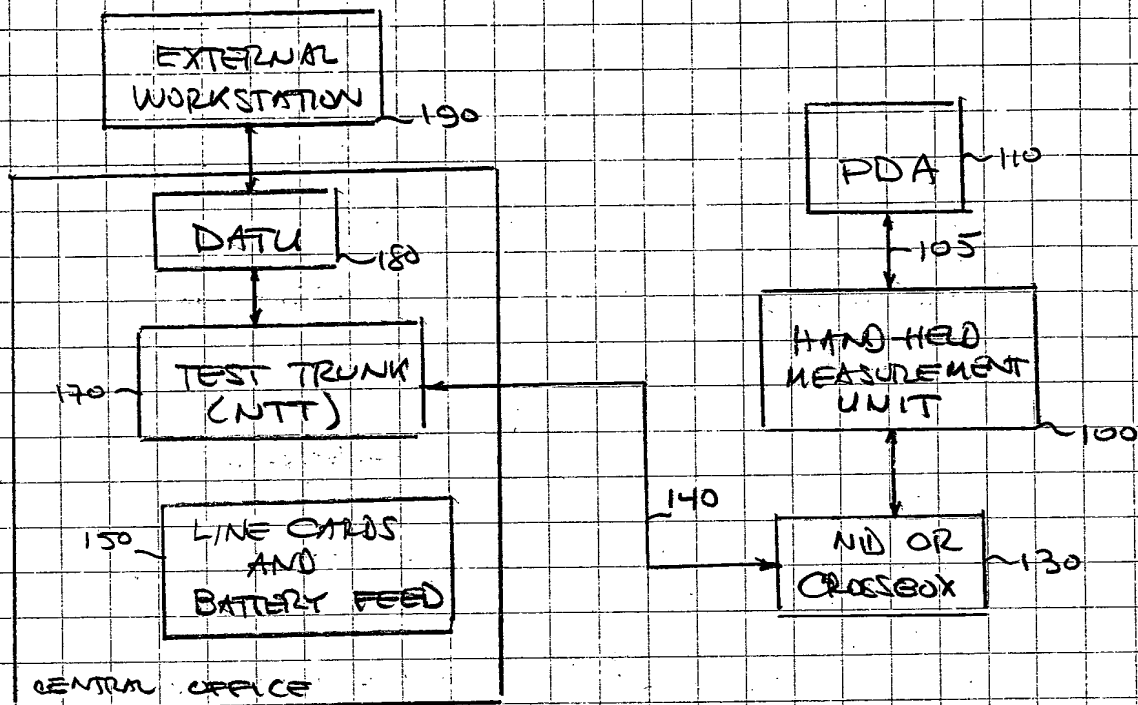


FIGURE 7.

# HAND-HELD MEASUREMENT UNIT

# CENTRAL OFFICE UNIT (DATU)

CONNECT TO LINE UNDER TEST - 801

MEASURE AND RECORD  
AC AND DC LINE VOLTAGE - 802

('AC VOLTAGE' TEST NO. 1)  
( 'DC VOLTAGE' TEST NO. 2)

DRIVE LINE OFF-HOOK,  
MEASURE AND RECORD  
LOOP CURRENT - 803

('LOOP CURRENT' TEST NO. 3)

QUALIFY DIAL TONE,  
DIAL DATA ACCESS NUMBER - 804

MONITOR CALL PROGRESS  
TUNES INCLUDING SIT TONES - 805

806 ~ DETECT RING-IN SIGNAL AND  
CAPTURE CALLER ID

807 ~ TRIP RINGING AFTER RECEIPT OF  
CALLER ID BEFORE SECOND  
RINGING SIGNAL

808 ~ GENERATE 350/440 Hz DIAL  
TONE FOR 500 ms

FIGURE 8A

DIAL DTMF ESCAPE SEQUENCE - 809

810 ~ WAIT FOR DTMF ESCAPE SEQUENCE

(TO STEP 811)



## HAND-HELD MEASUREMENT UNIT

## CENTRAL OFFICE UNIT (COAU)

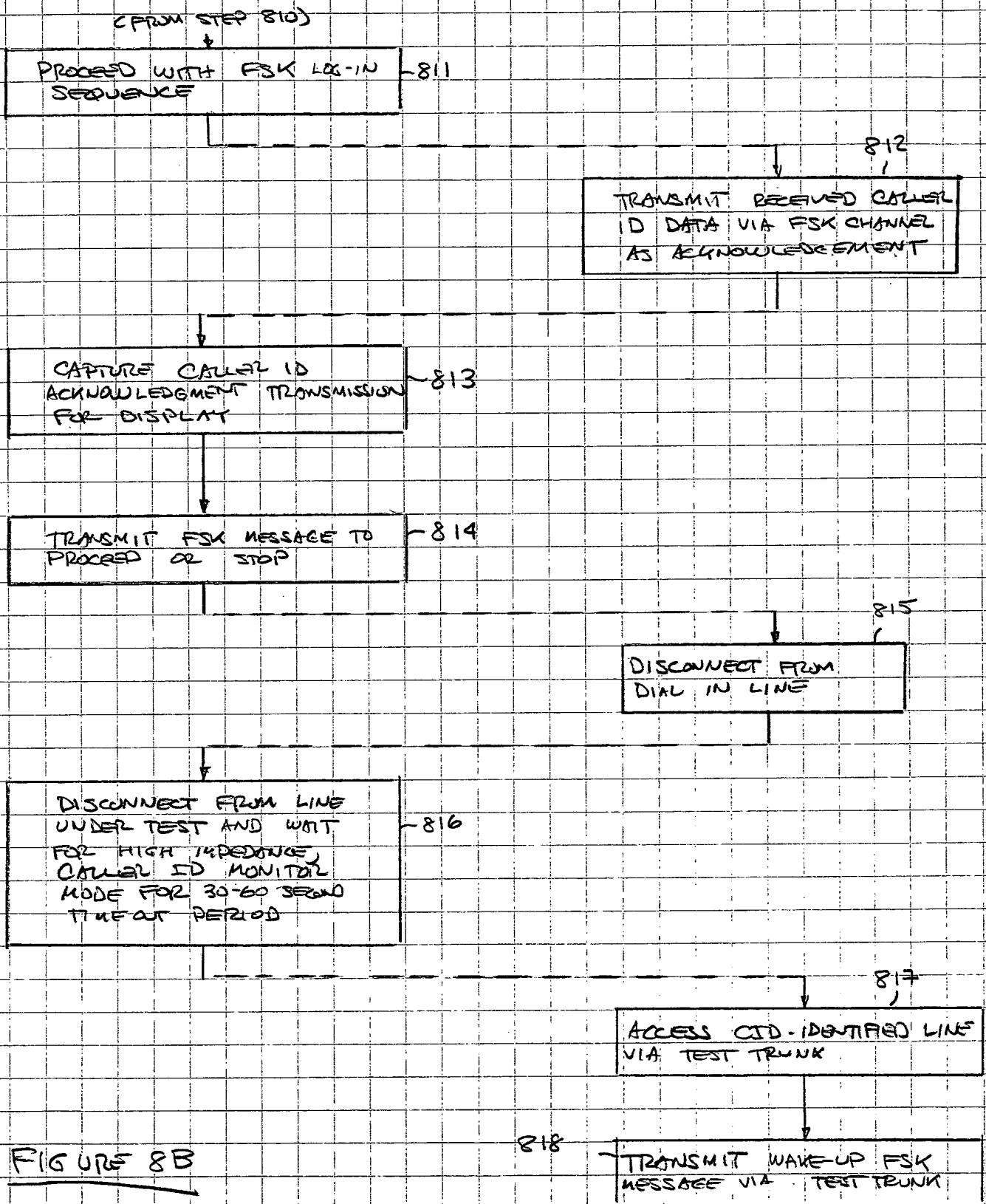


FIGURE 8B

## HAND-HELD MEASUREMENT UNIT

(FROM STEP 818)

ACTIVATE 600 OHM AC-TERMINATION  
AND TRANSMIT FSK ACKNOWLEDGEMENT - 819

INITIATE INTERACTIVE AUTO TEST  
SEQUENCE - 820

STEP THROUGH AUTO TEST  
SEQUENCE BY PROVIDING  
CONDITION OR MEASUREMENT  
AS REQUIRED - 822

TRANSMIT MEASUREMENT  
TEST RESULTS VIA FSK  
CHANNEL TO DATA - 824

DISPLAY INFORMATION AND  
DISCONNECT FROM LINE - 826

## CENTRAL OFFICE UNIT (DATA)

821  
STEP THROUGH AUTO TEST SEQUENCE  
BY PROVIDING CONDITION OR  
MEASUREMENT AS REQUIRED

823  
UPON COMPLETION OF AUTOTEST  
SEQUENCE, TRANSMIT DATA  
MEASUREMENT TEST RESULTS  
VIA FSK CHANNEL TO  
HAND-HELD MEASUREMENT UNIT

825  
TRANSMIT ACKNOWLEDGEMENT AND  
DISCONNECT MESSAGE

827  
DISCONNECT FROM TEST TRUNK

828  
STORE TEST RESULTS, CID NUMBER,  
NAME, TIME, TECHNICIAN ID, PASSWORD,  
HAND-HELD UNIT ID.

FIGURE 8C

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (DATA)

FIGURE 9A

DIAL-UP AND LOG IN TO DATA;  
REQUEST AUTO TEST;  
DISCONNECT AND WAIT FOR  
DATA ACKNOWLEDGEMENT VIA  
TEST TRUNK CONNECTION;  
BEGIN INTERACTIVE  
AUTO TEST SEQUENCE

901

902  
GENERATE MILLIWATT TONE  
(1004 HZ) FOR THREE SECONDS

903

MEASURE AND RECORD LOSS  
OF (1004 HZ) MILLIWATT TONE

('LOSS' TEST NO. 4)

904

ACTIVATE QUIET TERMINATION  
FOR FIVE SECONDS

905

MEASURE AND RECORD POWER  
INFLUENCE

('POWER INFLUENCE' TEST NO. 5)

906

MEASURE AND RECORD  
CIRCUIT NOISE

('CIRCUIT NOISE' TEST NO. 6)

907

SUBTRACT CIRCUIT NOISE  
FROM POWER INFLUENCE  
TO DERIVE BALANCE;  
RECORD BALANCE

('BALANCE' TEST NO. 7)

908

PROVIDE OPEN LINE  
FOR EIGHT SECONDS

(TO STEP 909)

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (COATU)

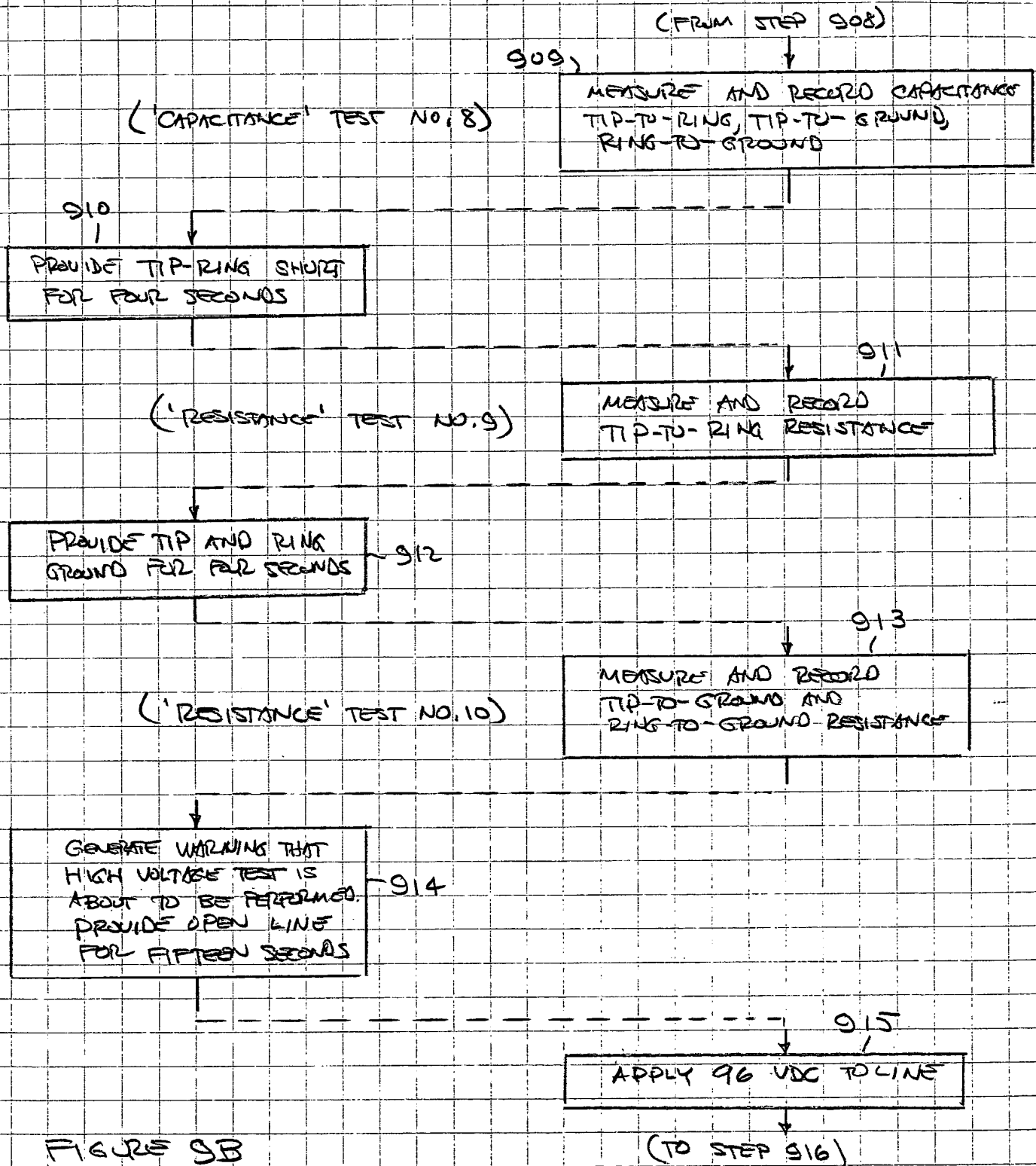


FIGURE SB

HAND-HELD MEASUREMENT UNIT

CENTRAL OFFICE UNIT (DATA)

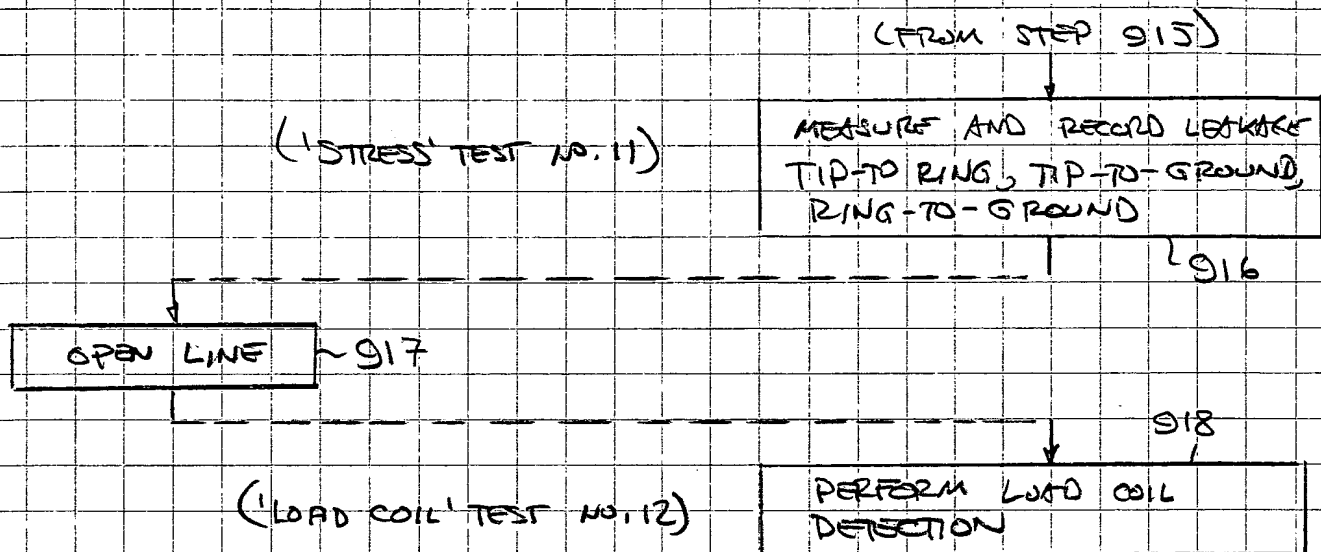


FIGURE 9C